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# NEWS LETTER



MANNING SEED COMPANY

DEXTER HORTON BUILDING  
SEATTLE 4, WASHINGTON, U.S.A.

BULLETIN NO. 1

MANINGSEED COLLECTION REGIONS  
In the DOUGLAS-FIR FORESTS  
Of OREGON and WASHINGTON

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The most important factors to observe in locating the correct seed sources for coniferous tree seeds are (1) average annual temperature, (2) minimum temperature, (3) rainfall, particularly during the growing season, and (4) general moisture conditions of the atmosphere.

In ordering "Bonded MANINGSEED", altitude and other topographic features should be taken into consideration as they affect climate, and within each region there may be specific soil conditions that will require consideration by the customer. The Douglas Fir region has dry summers; therefore, a seed source with a greater annual rainfall can be selected for planting at locations that have heavy rainfall during the growing season.

There are approximately eight degrees difference in the spread of average annual temperature between Canada and California in the Douglas-Fir region. There are also three specific climatic belts, namely:

- (A) The so-called "fog belt" between the Coast Range and the sea on the Oregon and Washington coast;
- (B) The drier interior valleys between the Coast Range and the middle elevation of the Cascades that extend from Puget Sound (Washington) south to the Siskiyou Mountains (Oregon), and
- (C) A smaller area in the rain shadow of the Olympic Mountains (Washington) that includes a strip along the northeast end of the Olympic Peninsula, the eastern shore of Vancouver Island (British Columbia) and the Puget Sound Islands that lie to the east.

The fog belt zone and the dry interior valley zone as shown on MANNING SEED COMPANY maps have been broken down into separate regions that vary from 2 to 3 degrees in average annual temperature and vary also in minimum temperature and rainfall. They are as follows:

REGION 1

The cold, moist zone on the northwestern tip of the Olympic Peninsula that is characterized by low maximum and high minimum temperatures. Its average annual temperature is from 47° to 49° and has a minimum of +7° F. The rainfall averages from 80 to 123 inches per year.

REGION 2

Cool, moist zone of the fog belt that extends south to include the mouth of the Columbia River. The average annual temperature in this zone varies from 49° to 51° with a +4 minimum and a rainfall of 60 to 126 inches.

REGION 3

The warm coastal zone that extends south to the Siuslaw River. Average annual temperature in this locality varies from 51° to 52° but has a minimum that drops to zero. The rainfall varies from 60 to 94 inches.

1. *Phragmites* (common)

#### REGION 4

This zone includes a broad coastal strip of highly productive forest that extends south to Cape Blanco, and a narrower coastal strip that extends south from there to the California line. It has an average annual temperature of 52° to 53° along the coast, and 55° in the interior with a minimum temperature of +14°. It is moist but not wet, having a rainfall of from 52 to 78 inches.

#### REGION 5

This is the low rainfall zone in the rain shadow of the Olympics in the northern part of the Puget Sound region that has a maritime atmosphere. The average temperature varies from 48° to 50°. The minimum on the islands is +5° and on the mainland is -3°. The rainfall varies from 18 to 36 inches per year.

#### REGION 6

This is the cool northern zone on the west slope of the Cascades from which much of the seed was obtained that has been sent to Europe to date. The average temperature varies from 49° to 50°, but the minimum drops to -11°. The average rainfall varies from 36 to 76 inches.

#### REGION 7

This is the first of the broad interior valley zones where the middle of the zone is made up of agricultural lands and the fringes toward the Coast Range to the west and toward the Cascades to the east constitute the forest areas. It varies in average annual temperature from 50° to 52°. The minimum varies also showing in some localities a minimum of +10° and dropping as low in others as -16°. The rainfall varies from 30 to 60 inches.

#### REGION 8

This zone includes the northern half of the Willamette Valley from the summit of the Coast Range to the middle elevations in the Cascades. The average annual temperature varies from 52° to 53° with a minimum temperature of 10°. Like the zone to the north, the rainfall varies from 30 to 60 inches.

#### REGION 9

This includes the dry part of southwestern Oregon where, as you proceed southward, the Douglas-Fir is replaced for the most part by ponderosa pine, and the forests in a few instances divert from their characteristic even-aged condition to a somewhat all-aged forest. The average annual temperature varies from 53° to 54° but has a minimum as low as -10°. The rainfall varies from 20 to 45 inches.

As previously stated, these zones are general in character. They are based on U. S. Weather Bureau records as published in the publication "Better Douglas-Fir Forests from Better Seed" printed by the University of Washington. These records represent mostly the middle and lower altitudes within their respective regions. When cone collections are made at higher elevations, they will represent a proportionately colder and more moist climate.

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The first part of the report deals with the general situation in the country. It is a very interesting and informative study of the country's development. The author has done a great deal of research and has put together a very comprehensive picture of the country's situation. The report is well written and is easy to read. It is a very good example of a well written report.

The second part of the report deals with the country's economic situation. It is a very interesting and informative study of the country's economic development. The author has done a great deal of research and has put together a very comprehensive picture of the country's economic situation. The report is well written and is easy to read. It is a very good example of a well written report.

The third part of the report deals with the country's social situation. It is a very interesting and informative study of the country's social development. The author has done a great deal of research and has put together a very comprehensive picture of the country's social situation. The report is well written and is easy to read. It is a very good example of a well written report.

The fourth part of the report deals with the country's political situation. It is a very interesting and informative study of the country's political development. The author has done a great deal of research and has put together a very comprehensive picture of the country's political situation. The report is well written and is easy to read. It is a very good example of a well written report.

The fifth part of the report deals with the country's cultural situation. It is a very interesting and informative study of the country's cultural development. The author has done a great deal of research and has put together a very comprehensive picture of the country's cultural situation. The report is well written and is easy to read. It is a very good example of a well written report.

The sixth part of the report deals with the country's environmental situation. It is a very interesting and informative study of the country's environmental development. The author has done a great deal of research and has put together a very comprehensive picture of the country's environmental situation. The report is well written and is easy to read. It is a very good example of a well written report.

The seventh part of the report deals with the country's future. It is a very interesting and informative study of the country's future development. The author has done a great deal of research and has put together a very comprehensive picture of the country's future situation. The report is well written and is easy to read. It is a very good example of a well written report.